



Docket No.: 03310/023001  
(PATENT)

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Patent Application of:  
Yutaka Kaneda

Application No.: 10/028,624

Confirmation No.: 6729

Filed: December 20, 2001

Art Unit: 2841

For: PROCESSES FOR MANUFACTURING  
MULTILAYER FLEXIBLE WIRING BOARDS

Examiner: J. C. Norris

**REQUEST FOR REINSTATEMENT OF PATENT TERM ADJUSTMENT**  
**UNDER 37 C.F.R. § 1.705**

MS ISSUE FEE  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

In response to the Notice of Allowance dated December 27, 2006, showing a Patent Term Adjustment ("PTA") of 40 days, the Applicant(s) hereby request reinstatement of a PTA of 105 days, and submit the following supporting documentation:

1. A copy of the Notice of Allowance dated December 27, 2006, which shows a PTA of 40 days;
2. A copy of the Non-final Office Action dated April 1, 2004, which restarted the response period;
3. A copy of the Response to the Non-final Office Action filed August 2, 2004; and
4. A copy of the Patent Application Information Retrieval (PAIR) contents record showing the calculation of the Patent Term Adjustment (PTA).

**REMARKS**


Please reinstate a PTA of 105 days for this application in view of the above supporting documentation and the following remarks.

The Notice of Allowance shows 40 days of PTA for the referenced application. However, Applicant believes that the 97 day reduction of the PTA for the response filed on August 2, 2004 is improper, due to the fact that the Examiner restarted the time period for reply after re-issuing the Non-final Office Action on April 1, 2004.<sup>1</sup> Therefore, the response filed on August 2, 2004 was late by 32 days, not 97 days. Accordingly, the correct PTA should be 105 days, not 40 days.

Applicant respectfully requests reinstatement of 105 days to the term of the referenced application. Applicant(s) believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 50-0591, under Order No. 03310/023001 from which the undersigned is authorized to draw.

Dated: January 5, 2007

Respectfully submitted,

By   
T. Chyau Liang, Ph.D.  
Registration No.: 48,885  
OSHA · LIANG LLP  
1221 McKinney St., Suite 2800  
Houston, Texas 77010  
(713) 228-8600  
(713) 228-8778 (Fax)  
Attorney for Applicant

Attachments (Notice of Allowance dated December 27, 2006)  
(Non-final Office Action dated April 1, 2004)  
(Response to the Non-final Office Action filed August 2, 2004)  
(Patent Application Information Retrieval (PAIR) contents record)

<sup>1</sup> The OA mailed on April 1, 2004 restarted the response period because the first mailing of this OA was directed to our old address, even though we had filed the address change under our customer number in early January 2004.



## UNITED STATES PATENT AND TRADEMARK OFFICE



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7590

12/27/2006

ROSENTHAL & OSHA  
1221 MCKINNEY  
SUITE 2800  
HOUSTON, TX 77010

<b>Docketed Action:</b>	
<input checked="" type="checkbox"/> New	<input type="checkbox"/> Previously <input type="checkbox"/> Non Required
Docket Number: 03310/023001	
Attorney Initials: TCL	
Docketing Initials: DKS	
DATE MAILED: 12/27/2006	
EXAMINER	
NORRIS, JEREMY C	
ART UNIT	PAPER NUMBER
2841	

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/028,624

12/20/2001

Yutaka Kaneda

03310.023001

6729

TITLE OF INVENTION: PROCESSES FOR MANUFACTURING MULTILAYER FLEXIBLE WIRING BOARDS

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1400	\$300	\$0	\$1700	03/27/2007

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. **PROSECUTION ON THE MERITS IS CLOSED.** THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN **THREE MONTHS** FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. **THIS STATUTORY PERIOD CANNOT BE EXTENDED.** SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

**HOW TO REPLY TO THIS NOTICE:****I. Review the SMALL ENTITY status shown above.**

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

- A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.
- B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

- A. Pay TOTAL FEE(S) DUE shown above, or
- B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

**II. PART B - FEE(S) TRANSMITTAL**, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

**III.** All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

**IMPORTANT REMINDER:** Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

Complete and send this form, together with

Applicable fee(s), to: Mail

Mail Stop ISSUE FEE  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent Office advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise. Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

7590

12/27/2006

ROSENTHAL & OSHA  
1221 MCKINNEY  
SUITE 2800  
HOUSTON, TX 77010

**Certificate of Mailing or Transmission**

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/028.624

12/20/2001

Yutaka Kaneda

03310.023001

6729

TITLE OF INVENTION: PROCESSES FOR MANUFACTURING MULTILAYER FLEXIBLE WIRING BOARDS

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1400	\$300	\$0	\$1700	03/27/2007

EXAMINER	ART UNIT	CLASS-SUBCLASS
NORRIS, JEREMY C	2841	174-254000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required.

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively,
- (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 \_\_\_\_\_  
2 \_\_\_\_\_  
3 \_\_\_\_\_

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies \_\_\_\_\_

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number \_\_\_\_\_ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature \_\_\_\_\_

Date \_\_\_\_\_

Typed or printed name \_\_\_\_\_

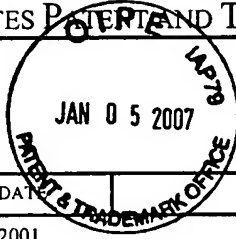
Registration No. \_\_\_\_\_

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/028,624	12/20/2001	Yutaka Kaneda	03310.023001	6729

7590

12/27/2006

ROSENTHAL & OSHA  
1221 MCKINNEY  
SUITE 2800  
HOUSTON, TX 77010

EXAMINER

NORRIS, JEREMY C

ART UNIT	PAPER NUMBER
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2841

DATE MAILED: 12/27/2006

## Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

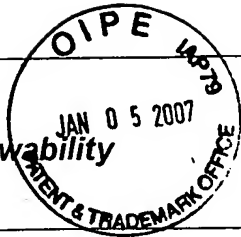
The Patent Term Adjustment to date is 40 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 40 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

**Notice of Allowability**



Application No.

10/028,624

Examiner

Jeremy C. Norris

Applicant(s)

KANEDA, YUTAKA

Art Unit

2841

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed 27 October 2006.
2. ☒ The allowed claim(s) is/are 1, 11 and 12.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
  1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

### **EXAMINER'S AMENDMENT**

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

The application has been amended as follows: In the claims – CANCEL claims 3-10.

#### ***Election/Restrictions***

Applicant's election of Group I in the reply filed on 2 August 2004 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

This application is in condition for allowance except for the presence of claims 3-10 directed to an election non-elected without traverse. Accordingly, claims 3-10 have been cancelled.

#### ***Allowable Subject Matter***

Claims 1, 11, and 12 are allowed.

The following is an examiner's statement of reasons for allowance: Claim 1 states the limitation "wherein a plurality of wiring patterns corresponding to individual layers of a multilayer flexible wiring board are directly arranged on the same surface of the substrate in the width direction, which is perpendicular to the longitudinal direction of the substrate, and a plurality of the directly arranged wiring patterns corresponding to

Art Unit: 2841

multilayer flexible wiring boards are arranged in the longitudinal direction of the substrate". This limitation, in conjunction with the other claimed features, was neither found to be disclosed in, nor suggested by the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


### ***Conclusion***

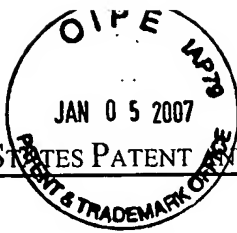
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremy C. Norris whose telephone number is 571-272-1932. The examiner can normally be reached on Monday - Friday, 9:30 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on 571-272-1984. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JCSN

  
DEAN A. REICHARD  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800 12/20/06



UNITED STATES PATENT AND TRADEMARK OFFICE

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/028,624	12/20/2001	Yutaka Kaneda	03310.023001	6729

7590 04/01/2004  
ROSENTHAL & OSHA  
1221 MCKINNEY  
SUITE 2800  
HOUSTON, TX 77010

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APR 05 2004

OSHA NOVAK & MAY L.L.P.

EXAMINER

NORRIS, JEREMY C

ART UNIT	PAPER NUMBER
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2827

DATE MAILED: 04/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Docketing	
Action:	<u>Response to OA</u>
Base Date:	<u>4-1-04</u>
Due Date:	<u>7-1-04</u>
Deadline:	<u>10-1-04</u>
Initials:	<u>AKS</u>
Atty/Sec. Initials:	

**Office Action Summary**



Applicati n No.

10/028,624

applicant(s)

KANEDA, YUTAKA

Examiner

Jeremy C. Norris

Art Unit

2827

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) 3-10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-2 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

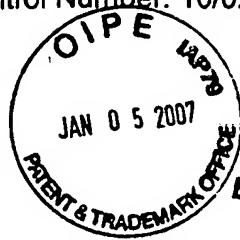
- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_



**DETAILED ACTION**

***Election/Restrictions***

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1 and 2, drawn to a printed circuit board, classified in class 174, subclass 254.
- II. Claims 3-6, drawn to a mask for making a printed circuit board, classified in class 428, subclass 901.
- III. Claims 7-10, drawn to a method of making a printed circuit board, classified in class 261, subclass 48.

The inventions are distinct, each from the other because of the following reasons:

Inventions II and I are related as apparatus and product made. The inventions in this relationship are distinct if either or both of the following can be shown: (1) that the apparatus as claimed is not an obvious apparatus for making the product and the apparatus can be used for making a different product or (2) that the product as claimed can be made by another and materially different apparatus (MPEP § 806.05(g)). In this case the device of the invention of group I could be formed by a screen printing apparatus as opposed to the photoetching apparatus claimed in the invention of group II.

Inventions III and II are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP §

806.05(e)). In this case the process of the invention of group II could be practiced by hand.

Inventions III and I are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the device of the invention of group I could be formed by a screen printing process as opposed to the photoetching process claimed in the invention of group III.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reasons given above and the search required for Group III is not required for Group I, restriction for examination purposes as indicated is proper.

During a telephone conversation with Ms. Macy Golson on 20 January 2004 a provisional election was made with traverse to prosecute the invention of group 1, claims 1 and 2. Affirmation of this election must be made by applicant in replying to this Office action. Claims 3-10 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

***Priority***

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Specification***

Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

Art Unit: 2827

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract of the disclosure is objected to because of the phrase "the present invention provides". Correction is required. See MPEP § 608.01(b).

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1 and 2 are rejected under 35 U.S.C. 102(e) as being anticipated by US. 6,320,135 (hereafter Saito).

Saito discloses, referring to figure 9, a stock sheet for a flexible wiring board comprising a flexible sheet-like substrate (101, see figure 1), and a plurality of wiring patterns (112, 115) arranged in a predetermined direction on the substrate and corresponding to patterns on individual layers of wiring boards of a multilayer flexible wiring board [claim 1], wherein each wiring pattern is arranged in a direction perpendicular to a transporting direction of the substrate [claim 2].

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US 6,195,881 Giardina et al.,

US 6,200,824 Hashimoto.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremy C. Norris whose telephone number is 571-272-1932. The examiner can normally be reached on Tuesday - Friday, 10am - 7pm.

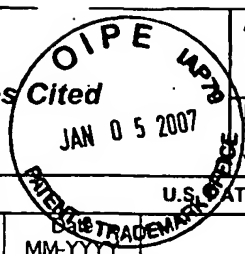
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamand Cuneo can be reached on 571-272-1957. The fax phone number for the organization where this application or proceeding is assigned is 703-308-0725.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

JCSN

  
CARL WHITEHEAD, JR.  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800

# Notice of References Cited



Application/Control No.

10/028,624

Applicant(s)/Patent Under  
Reexamination  
KANEDA, YUTAKA

Examiner

Jeremy C. Norris

Art Unit

2827

Page 1 of 1

## U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
	A	US-6,195,881	03-2001	Giardina et al.	29/846
	B	US-6,200,824	03-2001	Hashimoto, Nobuaki	438/15
	C	US-6,320,135	11-2001	Saito, Hirokazu	174/250
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

## FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
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## NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

\*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)  
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.



U.S. Patent Application Serial No. 10/028,624  
Attorney Docket No. 03310.023001

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant :	Yutaka KANEDA	Art Unit :	2827
Serial No.:	10/028,624	Examiner :	Jeremy NORRIS
Filed :	December 20, 2001	Confirmation No.:	6729
Title :	PROCESS FOR MANUFACTURING MULTILAYER FLEXIBLE WIRING BOARDS		

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**REPLY UNDER 37 CFR § 1.111**

In response to the Office Action dated April 1, 2004, please amend the application as follows and consider the included remarks.

IN THE ABSTRACT:

Please replace the abstract with the following.

~~In one embodiment, the present invention provides a~~ A process for manufacturing a multilayer flexible wiring board, which allows individual layers of wiring boards to be precisely positioned and to be readily stacked. A mask for exposure is prepared in which a plurality of pattern holes corresponding to individual layers of wiring boards of a multilayer flexible wiring board are arranged in the direction perpendicular to the transporting direction P of substrate. This mask for exposure is used to form a plurality of wiring patterns corresponding to individual layers of wiring boards of a multilayer flexible wiring board on the same sheet-like substrate.

### **REMARKS**

Please reconsider the application in view of the above amendments and the following remarks. Applicant thanks the Examiner for carefully considering this application.

#### **Disposition of Claims**

Claims 1-2 are pending in this application. Claim 1 is independent, and claim 2 depends from claim 1. Claims 3-10 have been withdrawn from consideration.

#### **Restriction Requirement**

Applicant hereby acknowledges that claims 3-10 are withdrawn from consideration due to a provisional election made in response to a restriction requirement to prosecute the invention of Group I, claims 1 and 2, on January 20, 2004 in a telephone conversation.

#### **Specification**

The Abstract is amended to conform to the Examiner's requirement. Accordingly, withdrawal of this objection is respectfully requested.

#### **Rejection(s) under 35 U.S.C § 102**

Claims 1-2 stand rejected under 35 U.S.C. § 102(e) as anticipated by U.S. Patent No. 6,320,135 ("Saito"). This the rejection is respectfully traversed.

The present invention relates to manufacturing a wiring substrate by arranging multiple identical wiring patterns in a predetermined direction on the substrate. Claim 1 recites a stock sheet for a flexible wiring board that comprises a flexible sheet-like substrate

and a plurality of wiring patterns that are arranged in a predetermined direction on the substrate and corresponding to patterns on individual layers of wiring boards of a multilayer flexible wiring board.

According to embodiments of the invention, the thickness of the substrate scarcely varies between the individual layers of the wiring boards. The dimensional changes in individual layers during the manufacturing process can be homogenized because a plurality of wiring patterns corresponding to the individual layers of wiring boards of a multilayer flexible wiring board are arranged on the same substrate. As a result, the present invention allows connecting electrodes on individual layers of wiring boards to be precisely positioned, thereby allowing the individual layers of wiring boards to be readily stacked. (See specification p. 6, l. 4 through p. 7, l. 5).

Claim 2 recites that each wiring pattern is arranged in a direction perpendicular to a transporting direction of the substrate. In addition, the variation in the thickness of the substrate or the like with different product lots can be minimized because the wiring patterns are arranged in a direction perpendicular to the transporting direction of the substrate. (See specification p. 7, ll. 6–9). Saito, on the other hand, discloses a predetermined wiring formed on a base film. Saito discusses a wiring pattern substrate that is formed when a copper layer is etched. In contrast to the present invention, as recited in amended claim 2, Saito fails to disclose that the wiring placed on the substrate (*i.e.*, the base film) is in a direction perpendicular to the wiring substrate. Further, Saito fails to disclose that the wiring substrate is “transported” in a particular direction.

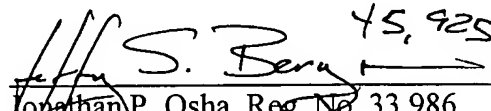
In view of the above, Saito fails to show or suggest the present invention as recited in the claims. Thus, the claims are patentable over Saito. Accordingly, withdrawal of this

rejection is respectfully requested.

Applicant believes this reply is fully responsive to all outstanding issues and places this application in condition for allowance. If this belief is incorrect, or other issues arise, the Examiner is encouraged to contact the undersigned or his associates at the telephone number listed below. Please apply any charges not covered, or any credits, to Deposit Account 50-0591 (Reference Number 03310.023001).

Respectfully submitted,

Date: 8/2/04

 45,925  
Jonathan P. Osha, Reg. No. 33,986  
OSHA & MAY L.L.P.  
One Houston Center, Suite 2800  
1221 McKinney Street  
Houston, TX 77010  
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Facsimile: (713) 228-8778

<b>CERTIFICATE OF MAILING BY "EXPRESS MAIL" (37 CFR 1.10)</b> Applicant(s): Yutaka KANEDA			Docket No. 03310/023001	
Application No. 10/028,624	Filing Date 10/20/2001	Examiner J. Norris	Customer No. 22511	Group Art Unit 2827
Invention: <b>PROCESS FOR MANUFACTURING MULTILAYER FLEXIBLE WIRING BOARDS</b>				
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PROCESSES FOR MANUFACTURING MULTILAYER FLEXIBLE WIRING BOARDS

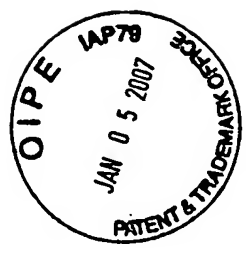
Application Data	Transaction History	Image File Wrapper	Patent Term Adjustments	Foreign Priority	Published Documents	Publication Dates	Address & Attorney/Agent
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Patent Term Adjustment

Filing or 371(c) Date:	12-20-2001	USPTO Delay (PTO) Delay (days):	341
Issue Date of Patent:	-	Three Years:	-
Pre-Issue Petitions (days):	+0	Applicant Delay (APPL) Delay (days):	301
Post-Issue Petitions (days):	+0	Total Patent Term Adjustment (days):	40
USPTO Adjustment(days):	+0	Explanation Of Calculations:	

Patent Term Adjustment History

Date	Contents Description	PTO(Days)	APPL(Days)
12-27-2006	Mail Notice of Allowance		
12-27-2006	Mail Examiner's Amendment		
12-23-2006	Notice of Allowance Data Verification Completed		
12-23-2006	Case Docketed to Examiner in GAU		
12-22-2006	Examiner's Amendment Communication		
11-15-2006	Date Forwarded to Examiner		
10-27-2006	Response after Non-Final Action		30
10-27-2006	Request for Extension of Time - Granted		
06-27-2006	Mail Non-Final Rejection		



06-26-2006	Non-Final Rejection	62
06-05-2006	Date Forwarded to Examiner	↑
06-05-2006	Date Forwarded to Examiner	↑
05-30-2006	Request for Continued Examination (RCE)	↑
06-05-2006	DISPOSAL FOR A RCE/CPA/129 (express abandonment if CPA)	↑
05-30-2006	Request for Extension of Time - Granted	↑
05-30-2006	Workflow - Request for RCE - Begin	↑
05-17-2006	Mail Advisory Action (PTOL - 303)	↑
05-15-2006	Advisory Action (PTOL-303)	↑
05-08-2006	Date Forwarded to Examiner	↑
04-27-2006	Amendment after Final Rejection	↑
04-27-2006	Request for Extension of Time - Granted	↑
12-29-2005	Mail Final Rejection (PTOL - 326) —	↑
12-27-2005	Final Rejection	↑
10-19-2005	Information Disclosure Statement considered	22
10-19-2005	Information Disclosure Statement (IDS) Filed	↑
10-04-2005	Date Forwarded to Examiner	↑
09-27-2005	Response after Non-Final Action	↑
06-27-2005	Mail Non-Final Rejection	↑
06-24-2005	Non-Final Rejection	90
04-23-2005	Date Forwarded to Examiner	↑
04-19-2005	Request for Continued Examination (RCE)	↑
04-23-2005	DISPOSAL FOR A RCE/CPA/129 (express abandonment if CPA)	↑
04-19-2005	Request for Extension of Time - Granted	↑
04-19-2005	Workflow - Request for RCE - Begin	↑
03-04-2005	Case Docketed to Examiner in GAU	↑
03-02-2005	Date Forwarded to Examiner	↑
02-22-2005	Amendment after Final Rejection	↑
02-22-2005	Request for Extension of Time - Granted	↑
12-02-2004	Case Docketed to Examiner in GAU	↑
10-19-2004	Mail Final Rejection (PTOL - 326)	↑
10-15-2004	Final Rejection	↑

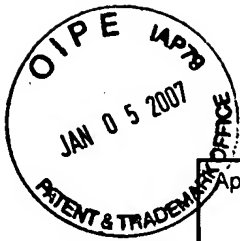
08-26-2004	Date Forwarded to Examiner
08-02-2004	Response after Non-Final Action
08-02-2004	Request for Extension of Time <u>Granted</u>
08-16-2004	Case Docketed to Examiner in GAU
08-02-2004	Workflow incoming amendment IFW
04-01-2004	Mail Notice of Restarted Response Period
04-01-2004	Letter Restarting Period for Response (i.e. Letter re: References)
04-01-2004	Correspondence Address Change
01-27-2004	Mail Non-Final Rejection
01-26-2004	Non-Final Rejection
07-17-2003	IFW TSS Processing by Tech Center Complete
05-24-2002	Case Docketed to Examiner in GAU
12-20-2001	Request for Foreign Priority (Priority Papers May Be Included)
04-12-2002	Transfer Inquiry to GAU
02-01-2002	Application Dispatched from OIPE
01-30-2002	Application Is Now Complete
01-16-2002	IFW Scan & PACR Auto Security Review
12-20-2001	Initial Exam Team nn

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Application No. (if known): 10/028,624

Attorney Docket No.: 03310/023001

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